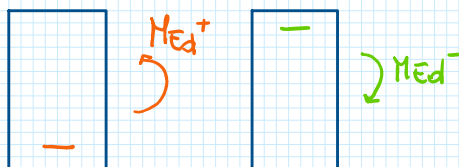
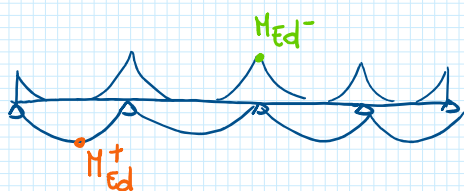
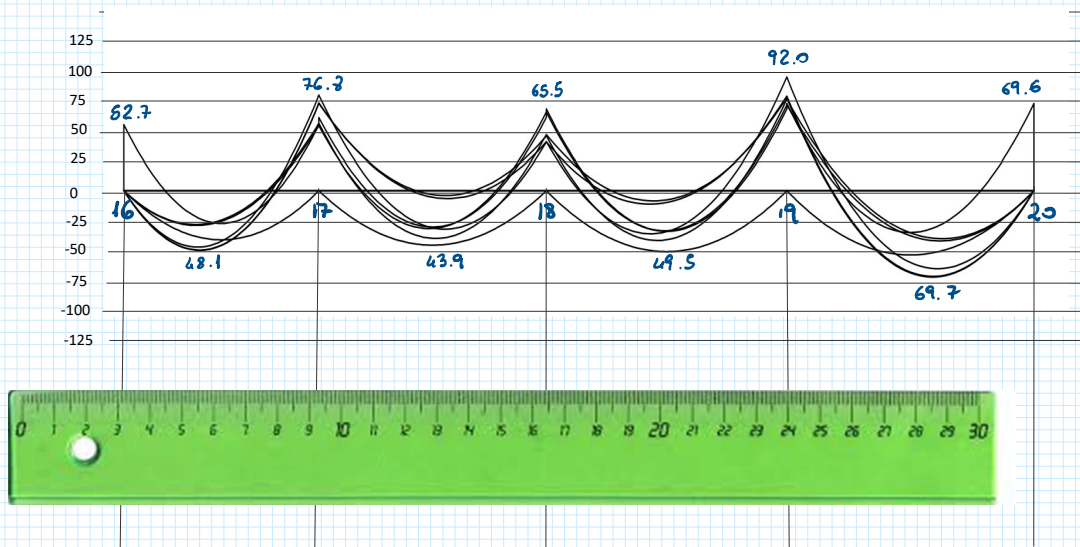


SCALA LUNGHEZZE 1:50

SCALA MOMENTI 1 cm = 25 kNm



DIMENSIONAMENTO DI A_s :

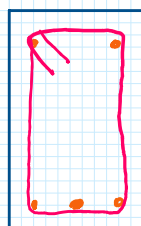
$$1) M_{ed} \Rightarrow A_s = \frac{M_{ed}}{0.9 d f_{yd}} \quad d = h_{tr} - c$$

$$2) A_s \geq 0.26 \frac{f_{ctm}}{f_{yk}} b d = 0.0015 b d$$

$f_{ctm} = 2.56$ (C25/30)
 $f_{yk} = 450$ (C25/30)

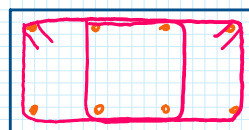
$$3) A_s \geq 0.0013 b d$$

4)



2 ARM. SUP

3 ARM. INF.



4 ARM. SUP

4 ARM. INF.

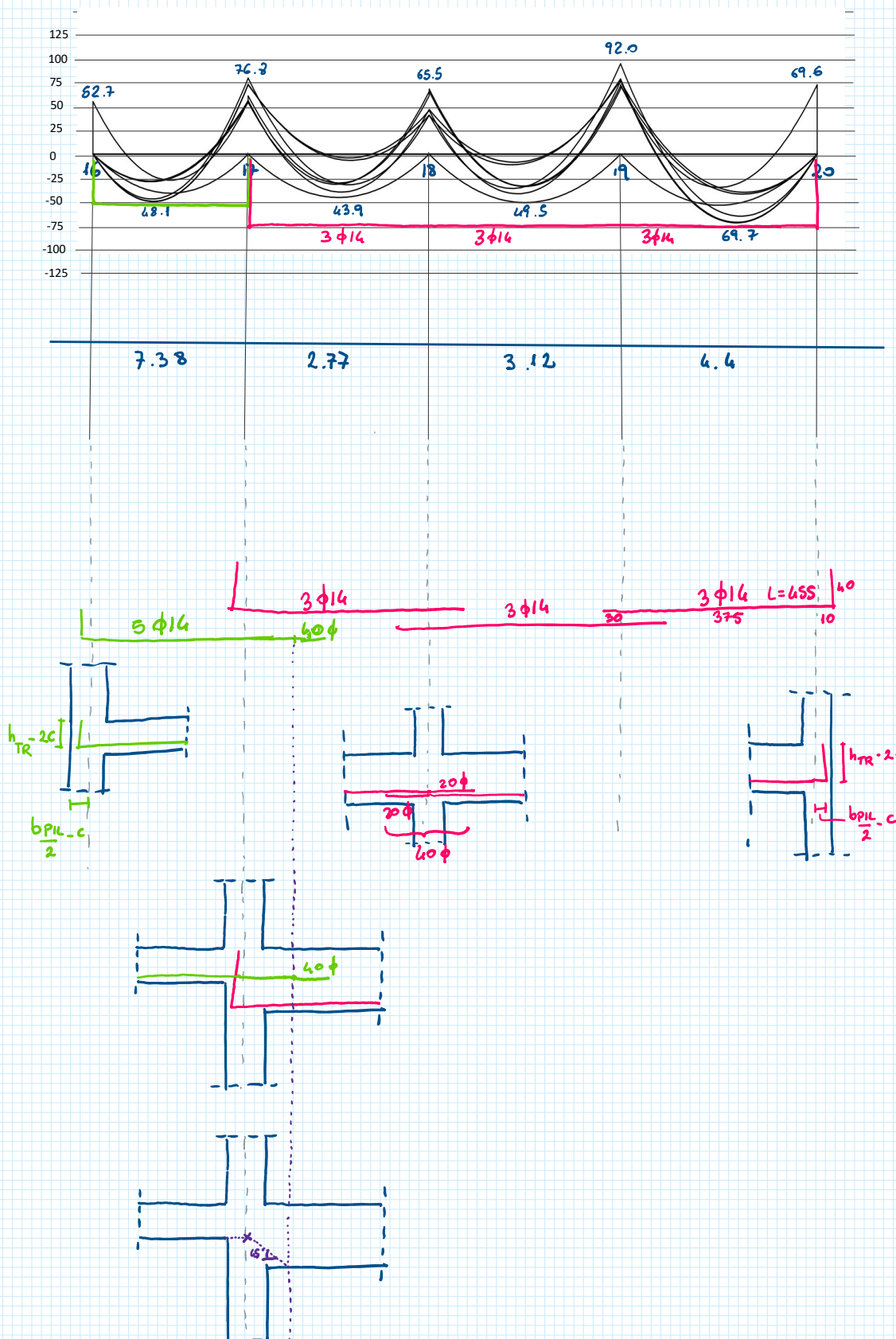
PROG. ARM. IN CAMPATA

Campata	Med [kNm]	b [cm]	d [cm]	As,calc [cm ²]	As,min [cm ²]	As [cm ²]
16-17	48.1	70	18.5	7.38	1.94	7.38
17-18	43.9	30	45	2.77	2.03	2.77
18-19	49.5	30	45	3.12	2.03	3.12
19-20	69.7	30	45	4.40	2.03	4.40

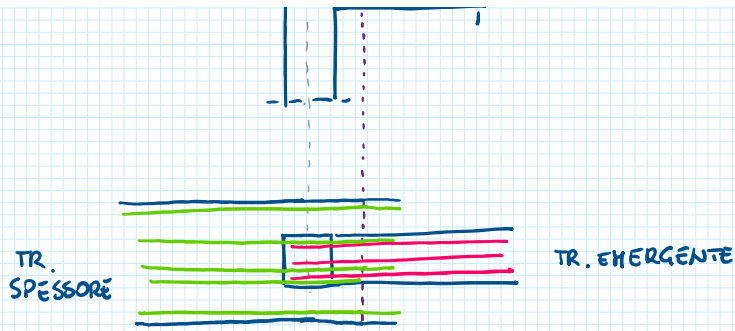
→ $\phi 14$
 $\phi 20$

SCALA LUNGHEZZE 1:50

SCALA MOMENTI 1 cm = 25 kNm



$$3\phi 14 = 4.62 \text{ cm}^2$$



$$M_{Rd1\phi14 \text{ T.E.}} = 0.9 \cdot 45 \cdot 1.54 \cdot \frac{391.3}{10^3} = 24.4 \text{ kNm}$$

$$M_{Rd3\phi14} = 3 \times 24.4 = 73.22 \text{ kNm}$$

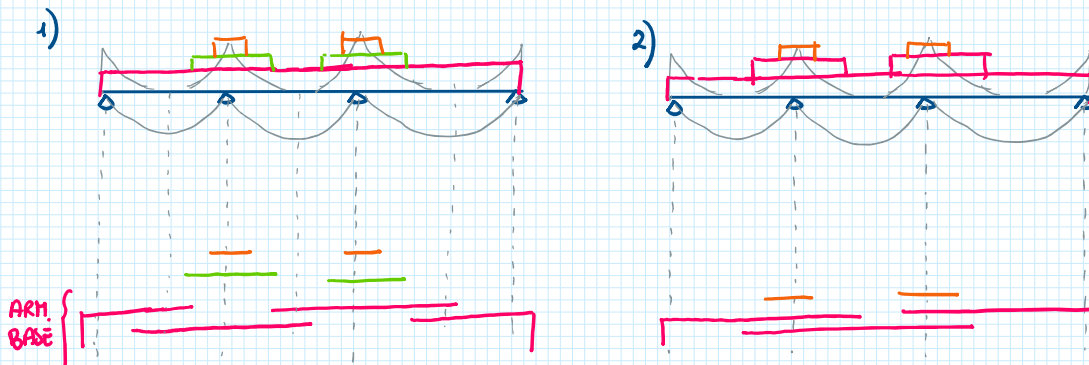
$$M_{Rd1\phi14 \text{ T.S.}} = 0.9 \cdot 18.5 \cdot 1.54 \cdot \frac{391.3}{10^3} = 10.03 \text{ kNm}$$

$$M_{Rd5\phi14 \text{ T.S.}} = 5 \times 10.03 = 50.15 \text{ kNm}$$

ARMATURA SUPERIORE

Appoggio	Med [kNm]	b [cm]	d [cm]	As,calc [cm ²]	As,min [cm ²]	As [cm ²]
16	52.7	70	18.5	8.09	1.94	8.09
17_TS	76.8	70	18.5	11.79	1.94	11.79
17_TE	76.8	30	45	4.85	2.03	4.85
18	65.5	30	45	4.13	2.03	4.13
19	92	30	45	5.81	2.03	5.81
20	69.6	30	45	4.39	2.03	4.39

POSSIBILI MODALITA' DI ARM. SUPERIORE:



SCALA LUNGHEZZE 1:50

SCALA MOMENTI 1 cm = 25 kNm

